



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Water Yield Relationships							
Course Code		ZTY606		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		Water is the basis of crop production and water should be used the best way to grow plants efficiently with high efficiency. That requires a good understanding of plant yield of water under different growth conditions and the effect on it. During the course, students learn quantitative methods for the relationship between water and yields.							
Course Content		Defining the concept of water-yield function, the relationship between transpiration and evapotranspiration with crop yield, the relationship between irrigation under adequate and limited irrigation conditions and crop yield, water use yield in irrigation management to achieve optimum.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Prof. Necdet DAĞDELEN							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Doorenbos et al., "Yield Response to Water", FAO Irrigation and Drainage Paper, N0: 33, (1986)
2	Hoffman, G.J., Howell, T.A., Solomon, K.H., "Management of Farm Irrigation Systems" American Society of Agricultural Engineers, (1992)
3	Köksal, H., Tarı, A.F., Çakır, R., Kanber, R., Ünlü, M., "Su-Verim İlişkileri" Köy Hizmetleri Genel Md. Yayınları, Ana Proje No: 435-1, 2001.

Week	Weekly Detailed Course Contents	
1	Theoretical	Defining the concepts in Water-Yield functions
2	Theoretical	Transpiration and evapotranspiration
3	Theoretical	The relationships between transpiration and evapotranspiration with crop yield
4	Theoretical	The relationships between transpiration and evapotranspiration and crop yield
5	Theoretical	Estimating the maximum yield
6	Theoretical	Estimating the maximum water consumption
7	Theoretical	Adequate and limited irrigation
8	Theoretical	Irrigation under adequate and limited irrigation conditions
9	Intermediate Exam	Midterm Exam
10	Theoretical	Relationships between crop yield and adequate and limited irrigation
11	Theoretical	Relationships between crop yield and adequate and limited irrigation
12	Theoretical	The concept of optimum yield
13	Theoretical	The concept of water use efficiency
14	Theoretical	The management of irrigation to achieve optimum efficiency concept
15	Theoretical	The management of irrigation to achieve optimal water use efficiency
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Lecture - Practice	14	2	2	56
Midterm Examination	1	8	2	10



Final Examination	1	12	2	14
Total Workload (Hours)				150
[Total Workload (Hours) / 25*] = ECTS				6
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	The relationship between crop yield and irrigation water applied
2	Introduction to water-production functions
3	Water-production functions under adequate and deficit irrigation conditions
4	To avoid problems which may be encountered during irrigation management
5	To achieve the expected economic targets for existing conditions

Programme Outcomes (Agricultural Structures and Irrigation Doctorate)

1	Ability to analyze, synthesize and evaluate different forms of scientific knowledge in the field of studies
2	Approach to information systematically, and gain skills related to their field the research methods
3	Innovative science to develop a scientific method or a method that is known to practice in their field
4	Ability to organize and manage the project and advanced scientific research
5	Advanced technologies, find solutions to engineering problems taking advantage of the software and model approaches
6	Creative, unbiased and critical thinking
7	A topic in the field of written, verbally and visually as the ability to express
8	Ability to publish in refereed journals National and international the results of studies

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P2	5	5	5	5	5
P3	4	5	5	4	4
P4	5	4	4	5	5
P5	5	4	4	4	5
P6	5	3	3	5	5
P7	5	3	3	5	5
P8	4	3	3	4	5

